

IN THE CLAIMS

Please amend Claims 1, 2, 4-11, and 13-22 to read as follows.

1. (Currently Amended) An electron-emitting device comprising a substrate; first and second carbon films disposed so as to have a first gap between the first and second carbon films on a surface of the a substrate, and first and second electrodes electrically connected with to the first and the second carbon films respectively, wherein the carbon films has have a first region showing orientation, and the a direction of the orientation is an approximately parallel to the surface of the substrate surface.

2. (Currently Amended) An electron-emitting device comprising a substrate; first electrode and second electrodes disposed on a surface of the a substrate, and a carbon film electrically connected to the first and second electrodes, wherein the carbon film has a first gap at a portion in itself, and has a first region showing orientation, and the a direction of the orientation is the approximately parallel to the surface of the substrate surface.

3. (Original) The electron-emitting device according to claim 1 or 2, wherein the direction of the orientation is not less than -45 degrees and not more than +45 degrees against the substrate surface.

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4. (Currently Amended) The electron-emitting device according to claim 1 or 2, wherein the first region showing orientation faces the first gap.

5. (Currently Amended) The electron-emitting device according to claim 4, wherein said first region showing orientation is disposed in the a region of the a distance of not more than 100 nm from the an end portion of said carbon film facing said first gap toward the a direction of said electrodes.

6. (Currently Amended) The electron-emitting device according to claim 1 or 2, wherein said carbon film further has a second region orientated in an a direction approximately normal direction against to the surface of said substrate surface.

7. (Currently Amended) The electron-emitting device according to claim 6, wherein said the approximately normal direction is not less than -30 degrees and not more than +30 degrees from a normal direction against the surface of said substrate surface.

8. (Currently Amended) The electron-emitting device according to claim 6, wherein the second region orientated in said approximately normal direction is disposed between the first region orientated in said approximate parallel direction and said electrodes.

9. (Currently Amended) The electron-emitting device according to claim 6, wherein said carbon film has a third region without any particular orientation, and said third region without any particular orientation is disposed between the first region orientated in said approximate parallel direction and the second region orientated in said approximately normal direction.

10. (Currently Amended) The electron-emitting device according to claim 1 or 2, wherein said carbon film and the first and the second electrodes are connected via ~~a conductive~~ an electroconductive film.

11. (Currently Amended) An electron source comprising a plurality of electron-emitting devices which have been arranged and formed on a substrate, wherein ~~the~~ each electron-emitting device is the electron-emitting device according to claim 1 or 2.

12. (Original) An image forming apparatus comprising an electron source and an image forming member forming images with electrons to be emitted from the electron source being radiated, wherein the electron source is an electron source according to claim 11.

13. (Currently Amended) An electron-emitting device comprising:
~~a substrate;~~

(a) first and second electrodes electroconductive films electrically connected to first and second electrodes, respectively, on a substrate surface, and disposed between the first and second electrodes respectively having been disposed on the substrate surface;

first and second conductive films having a second gap disposed between said electrodes and respectively connected with said first and the second electrode;

(b) a first carbon film, part of the first carbon film being disposed on the first electroconductive film and another part of the first carbon film being disposed between the first and second electroconductive films;

first and (c) a second carbon film having a first gap within said second gap and disposed so as to be respectively connected with said first and the second conductive film, part of the second carbon film being disposed on the second electroconductive film and another part of the second carbon film being disposed between the first and second electroconductive films;

wherein said first and the second carbon film films respectively covers a part of said first and the second conductive film, and the carbon film disposed on said conductive film has have a region showing orientation, on the first and second electroconductive films, and

wherein a direction of the orientation is an approximately normal direction against said relative to the substrate surface.

14. (Currently Amended) An electron-emitting device comprising:

a substrate;
first and second electrodes respectively having been disposed on said
a surface of a substrate surface;

a conductive an electroconductive film connected with connecting
said both first and second electrodes and having including a second gap disposed in one
portion of itself;

a carbon film connected with to said conductive electroconductive
film and having including a first gap in one portion of itself,

wherein said first gap is disposed inside said second gap, and said
carbon film has, on said conductive electroconductive film, a first region showing
orientation, and a direction of the orientation is approximately normal direction against to
the surface of said substrate surface.

15. (Currently Amended) The electron-emitting device according to
claim 13 or 14, wherein the direction is not less than -30 degrees and not more than +30
degrees against relative to the surface of the substrate surface.

16. (Currently Amended) The electron-emitting device according to
claim 13 or 14, wherein said carbon film further has a second region orientated in the an
approximately parallel direction to the surface of said substrate surface.

17. (Currently Amended) The electron-emitting device according to
claim 16, wherein said approximately parallel direction is not less than -45 degrees and not
more than +45 degrees along the surface of said substrate surface.

18. (Currently Amended) The electron-emitting device according to
claim 16, wherein the second region ~~orientated in said approximate parallel direction~~ faces
said first gap.

19. (Currently Amended) The electron-emitting device according to
claim 16, wherein said second region ~~orientated in said approximately parallel direction~~ is
disposed in ~~the a region of the a~~ distance of not more than 100 nm from the an end portion
of said carbon film facing said first gap toward the a direction of said electrodes.

20. (Currently Amended) The electron-emitting device according to
claim 16, wherein the first region ~~orientated in said approximate normal direction~~ is
disposed between the second region ~~orientated in said approximate horizontal direction~~ and
said electrodes.

21. (Currently Amended) ~~An~~ The electron-emitting device according to
claim 16, wherein said carbon film has a third region without any particular orientation, and
said third region without any particular orientation is disposed between the first region

~~orientated in said approximate horizontal direction and the second region orientated in said approximately normal direction.~~

22. (Currently Amended) An electron source comprising a plurality of electron-emitting devices which have been arranged and formed on a substrate, wherein the electron-emitting device is the electron-emitting device according to ~~any of~~ claim 13 or 14.

23. (Original) An image forming apparatus comprising an electron source and an image forming member forming images with electrons to be emitted from the electron source being radiated, wherein the electron source is an electron source according to claim 22.